

Work Order ID 138408

Tuesday, October 27, 2015 11:27:57 AM

138408

Page 1

Item ID: D4170-3

Accept

N900040100

Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Bushing

Start Date: 10/26/2015 Start Qty: 12.00

12

Cust Item ID:

Required Date: 10/26/2015 Req'd Qty: 12.00

12

Customer:

Reference:

Approvals: Process Plan: MLJ Date: OCT 29 2015

Tooling:

Date:

Run Start ***NR1***

QC: _____ Date: _____ SPC (Y/N): _____

Date:

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

Draw Nbr	Revision Nbr
D4170	B

100

0.00

100

Hardinge CNC LATHE SMALL

Hardinge

Memo

0.06

Hardinge CNC Lathe Small

Machine as per Folio FA989

FOLIO REV: AA

DWG REV: B

DEBURR

31 JK
30

φ

JTC 2015-11-17

110

QC2- Inspect parts off machine FAI/FAIB

0.00

110

QC

Memo

0.00

Quality Control

31 JK
30

φ

JTC 2015-11-17

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QS1042) Approval		
Description Work Order Deviation				Disposition				Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : ☐							
Misidentified ☐	Past Due ☐								

Work Order ID 138408

Tuesday, October 27, 2015 11:27:57 AM

138408

Page 2

Item ID: D4170-3 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: Bushing
Start Date: 10/26/2015 Start Qty: 12.00 ***12*** Cust Item ID:
Required Date: 10/26/2015 Req'd Qty: 12.00 ***12*** Customer:
Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
120	QC8- Inspect parts - second check	0.00							DAS 40 9-89
120						31	Ø		15/11/17
QC	Memo	0.00							
Quality Control									
130	Identify as per dwg & Stock Location: <u>STOCK</u>	0.00							
130						31			NOV 18 2015
Packaging	Memo	0.00							
Packaging	*** STOCK IN STORES***								
140	QC21- Final Inspection - Work Order Release	0.00							
140									NOV 18 2015
QC	Memo	0.02							
Quality Control									

SA 20151118

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					

Root Cause				FAULT CATEGORY			
Environment ☐	☐	No Re-verification ☐		☐	Temperature/Cure ☐	☐	Power Loss/Surge ☐
Design ☐	☐	Operator ☐		☐	Set-up ☐	☐	Folio/Program ☐
Doc/Data ☐	☐	Offset/Setup ☐	☐	Pressure/Forced ☐	BOM/Route ☐	☐	Grain ☐
Equip/Tooling ☐	☐	Supplier ☐	☐	Bending ☐	Broken/Damage/Defect ☐	☐	Weld ☐
Handling/Pre ☐	☐	Training ☐	☐	Centre Not Concentric ☐	Inspection Incomplete/Unqualified ☐	☐	Wrong Stock Pulled ☐
Material ☐	☐	Use for Testing ☐	☐	Cracks ☐	Contamination ☐	☐	Out of Sequence ☐
Internal Transport ☐	☐	Poor Information ☐	☐	Crimp/Kink/Ripple/Wave ☐	Countersink ☐	☐	Off-set ☐
Tribal Knowledge ☐	☐	Rushing ☐	☐	Cuffs ☐	Cut Too Short ☐	☐	Mislabeled ☐
LOA ☐	☐	Product Improvement ☐	☐	Crushing ☐	Instructions Incomplete/Unclear ☐	☐	Fit/Function ☐
Substation ☐	☐	Process Improvement ☐	☐	Heat Treat ☐	Drill Holes ☐	☐	Misaligned/off center ☐
Past Expiry Date ☐	☐	Manufacturing Process ☐	☐	Wave/Twist in Tube ☐	OTHER : _____		
Misidentified ☐	☐	Past Due ☐	☐	Marks/Chatter ☐			

Picklist Print

Tuesday, October 27, 2015 11:27:56 AM

Page 1

Work Order ID: 138408

138408

Parent Item: D4170-3

D4170-3

Parent Item Name: Bushing

Start Date: 10/26/2015

Required Date: 10/26/2015

Start Qty: 12.00

Required Qty: 12.00

Comments: IPP REV:A NEW ISSUE 10-10-28 JLM VERIFIED BY:DD IPP
Rev:A 10.11.02 as per revB DD verf:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M6061T6R0.500		Purchased		No			f	45.5800		3.3			

M6061T6R0 500

6061-T6 Round Bar .500"

Location	Loc Qty	Loc Code
MAT	20.75	
M133368	20.75	
MAT012	24.83	
M129845	0.5	
M132876	24.33	

9.979 JFC 2015-11-17

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

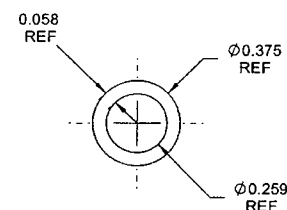
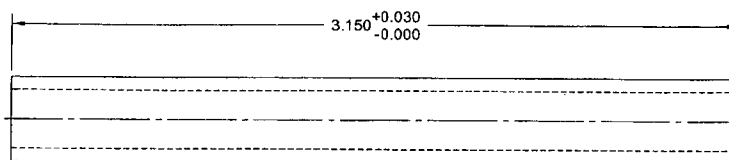
QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :				MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval	
Description Work Order Deviation				Disposition					
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐							
		OTHER : ☐							

STOP COPY
RETURN TO
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ORIGINAL COPY
IN THE PLANT

138408-MW
15-10-29



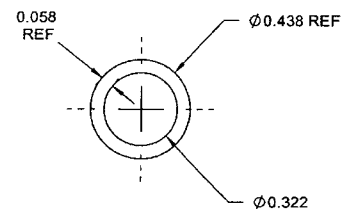
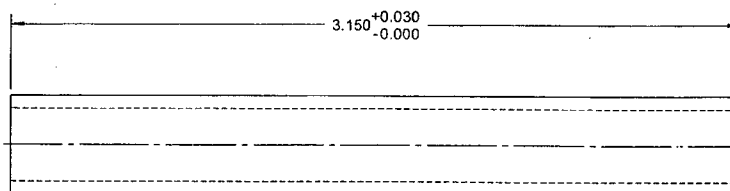
D4170-1 SPACER

RELEASED
2010-11-01

NOTES:

- 1) MATERIAL: 6061-T6 OR 6061-T62 TUBING, $\phi 3/8$ OD X 0.058 WALL
PER WW-T-700/6, AMS 4080, AMS 4082, QQ-A-200/8, OR QQ-A-225/8
REF DART SPEC. M6061T6T0.375W.058
- 2) FINISH: N/A
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: N/A
- 7) WEIGHT: 0.01lbs

B	ADD-3 (SHEET 2)	CP	10.10.25
A	NEW ISSUE	SC	10.07.22
REV.	DESCRIPTION	BY	DATE
DESIGN	SC		
DRAWN	JP		
CHECKED	JP		
MFG. APPR.	JP		
APPROVED	JP		
DE APPR.	JP		
DATE	10.10.25		
DART AEROSPACE USA, INC. PORT HADLOCK, WA		REV. B SHEET 1 OF 2	
DRAWING NO. D4170		SCALE NTS	
TITLE SPACER		DATE 10.10.25	
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D4170-3 SPACER

RELEASED
2010-11-01

NOTES:

- 1) MATERIAL: 6061-T6 ROUND BAR, $\phi 7/16$ OD
PER QQ-A-225/8, QQ-A-200/8, ASTM B211, OR ASTM B221
REF DART SPEC. M6061T6R0.438
OR
6061-T6 OR 6061-T82 TUBING, $\phi 7/16$ OD X 0.058 WALL
PER WW-T-700/6, AMS 4080, AMS 4082, QQ-A-200/8, OR QQ-A-225/8
REF DART SPEC. M6061T6T0.438W.058
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: N/A
- 7) WEIGHT: 0.01lbs

DESIGN	SC	DART AEROSPACE USA, INC.	
DRAWN	<i>[Signature]</i>	PORT HADLOCK, WA	
CHECKED	<i>[Signature]</i>	DRAWING NO. D4170	REV. B
MFG. APPR.	<i>[Signature]</i>	SHEET 2 OF 2	
APPROVED	<i>[Signature]</i>	TITLE	SCALE
DE APPR.	<i>[Signature]</i>	SPACER	NTS
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